



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,481	09/08/2003	Richard Chiles	3515.1	2662

22886 7590 03/03/2006

AFFYMETRIX, INC
ATTN: CHIEF IP COUNSEL, LEGAL DEPT.
3420 CENTRAL EXPRESSWAY
SANTA CLARA, CA 95051

EXAMINER

LIN, JERRY

ART UNIT PAPER NUMBER

1631

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/657,481	Applicant(s) CHILES ET AL.	
	Examiner Jerry Lin	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1 page</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112, 2nd paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 19, and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6 and 19, it is unclear what is meant by the limitation "(n)."

One interpretation is that it represents several nucleotides. Another interpretation is that it represents a chemical other than a nucleotide. For purposes of this examination, the Examiner will interpret the limitation as the former.

Claims 10-12 recite the limitation "the graphical format" in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claim. The instant limitation was not mentioned previously in the instant claims or in any claims from which it depends.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

Art Unit: 1631

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 13-24, 26, and 27, are rejected under 35 U.S.C. 102(e)(1) as being anticipated by Neville et al. (US 2005/0196771 A1).

The instant claims are drawn to a method of displaying genotype calls from probe array experiments using emission intensity values.

Regarding claims 1, 14, and 27, Neville et al. disclose receiving one or more sets of emission intensity data that is associated with a probe on a probe array (page 21, paragraph 0219-0220), generating a plurality of genotype calls which are based partially on the emission intensity values (page 5, paragraph 0033-0094); assembling and displaying the genotype calls in or more planes of a graphical user interface (page 6, paragraph 0051; Figure 16B). Neville et al. also disclose a computer with a memory (page 3, paragraph 0023), and implementing his method through executable code (page 24, paragraph 0252-page 25, paragraph 0254).

Regarding claims 2-5 and 15-18, Neville et al. disclose where the emission intensity values are emissions from a scanned probe array (page 21, paragraph 0219-0220); wherein the probes are genotyping probes (page 4, paragraph 0029- page 5, paragraph 0032), sequencing probes (page 21, paragraphs 0218-0221), or SNP probes (page 21, paragraphs 0218-0221).

Regarding claims 6, 7, 19, and 20, Neville et al. disclose where the genotype call includes a A, G, C, T or (n) call (page 32, paragraph 0319) or a SNP call (page 32, paragraph 0319; Figure 17; page 33, paragraph 0331- page 34, paragraph 0333).

Regarding claims 8, 9, 21, and 22, Neville et al. disclose wherein the panes in a tabular format or a graphical format (Figures 1-21).

Regarding claims 10, 11, 23, and 24, Neville et al. disclose wherein the graphical format includes SNP call quality (page 32, paragraph 0327-page 33, paragraph 0329; Figure 20) or genotype calls associated with a representation of a sequence (Figure 12A-J).

Regarding claims 13 and 26, Neville et al. disclose wherein the annotation information is received in response to the user and the annotation information is displayed (page 3, paragraph 0021 - page 4, paragraph 0024).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neville et al. (US 2005/0196771 A1) in view of Heid et al. (US 2003/0027179).

The instant claims are drawn to a method of displaying genotype calls from probe array experiments using emission intensity values, in particular instant claims 12 and 25 include a representation of probe intensity.

Neville et al. is applied as above.

However, Neville et al. do not explicitly teach having a representation of probe intensity.

Heid et al. teach having graphically plotting the fluorescent signals of a probe assay (page 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art to combine the methods of Neville et al. and Heid et al. to gain the benefit of creating an internal control for Neville et al.'s process. According the Neville et al.'s process, amplification by PCR is preferred for using a genechip (Neville et al., page 0219). However, Heid et al. disclose that PCR amplification may lead to false negatives or positives without internal controls (Heid et al., page 1, paragraphs 0006-0008). In order to properly monitor the internal controls disclosed by Heid et al., Heid et al. suggests monitoring the fluorescent signals of the probe assay via plotting (Heid et al., page 2, paragraph 0024). Thus avoid false negatives or positives, one of ordinary skill in the art would be motivated to combine the internal controls including plotting the fluorescent signals as taught by Heid et al. while using the method of Neville et al.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Lin whose telephone number is (571) 272-2561. The examiner can normally be reached on 10:00am-6:30pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, Ph.D. can be reached on (571) 272-0718. The fax phone

number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Representatives are available to answer your questions daily from 6 am to midnight (EST). When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center at (800) 786-9199.

JL

MICHAEL BORIN, PH.D
PRIMARY EXAMINER

